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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------------|------------------|
| 10/785,019 | 02/25/2004 | Shingo Nakanishi | 04024 | 9024 |
| 23338 | 7590 | 09/20/2005 | | |
| DENNISON, SCHULTZ, DOUGHERTY & MACDONALD 1727 KING STREET SUITE 105 ALEXANDRIA, VA 22314 | | | EXAMINER ROJAS, BERNARD | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2832 | |

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/785,019

Applicant(s)

NAKANISHI ET AL.

Examiner

Bernard Rojas

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 10-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>02252004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9, and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by TARUI et al. [JP 07307435 A].

Claim 1, TARUI et al. discloses an actuator comprising: a core [62, 64]; a coil [61] attached to the core and arranged and constructed to produce a magnetic field, wherein the core provides a path of the magnetic field; a rotor [4] rotatably mounted within the core, so that the rotor rotates in response to the magnetic field produced by the coil; and an IC [200] attached to the core and electrically connected to the coil, wherein the distance between the IC and the coil is determined based on a permissible temperature of the IC, so that the IC is not heated to substantially exceed the permissible temperature [the distance between the IC and the coil has to be great enough to regulate the temperature of the IC, or else the actuator would not work since the IC would be damaged by over heating].

Claim 2, TARUI et al. discloses an actuator further including a connector [figure 11] connected to the IC, so that a power source voltage [211] and a control signal [212] are supplied to the IC via the connector, wherein the IC supplies an excitation current to the coil based upon the control signal [figures 1 and 2, translation paragraph 46].

Claim 3, TARUI et al. discloses that the coil is positioned on one side of the core [figure 10].

Claim 4, TARUI et al. discloses that the IC is positioned on the side opposite to the coil [figure 9].

Claim 5, TARUI et al. discloses that the IC is positioned adjacent to a part of the core that is adapted to contact a heat dissipation member [11, 12 translation paragraph 27].

Claim 6, TARUI et al. discloses that the IC is positioned such that a distance between a center of the IC and a part of the core that is adapted to contact a heat dissipation member is smaller than a distance between the center of the IC and a central axis of the coil [figure 10].

Claim 7, TARUI et al. discloses that a molding material is molded integrally with the actuator, so that the IC is fixed in position relative to the core by the molding material [translation paragraph 48].

Claim 8, TARUI et al. discloses that the molding material substantially encloses the IC [translation paragraph 48].

Claim 9, TARUI et al. discloses that the molding material is made of heat-resistant resin [translation paragraph 48, the resin has to be heat-resistance since it cover the coil and the core that become hot during operation].

Claim 20, TARUI et al. discloses an actuator comprising: a connector arranged and constructed to be connected to a power source and to receive a control signal

Art Unit: 2832

[figure 11]; a coil [61] arranged and constructed to produce a magnetic field when excited; an IC [200] arranged and constructed to supply an excitation current to the coil based on the control signal, wherein the excitation current is greater than a current of the control signal [figures 1 and 2]; a core [62, 64] arranged and constructed to provide a path of the magnetic field of the coil; a rotor [4] disposed within a part of the core; wherein: the coil is disposed on one side of the core; and the IC is attached to the core on the side opposite to the coil [figure 9].

Claim 21, TARUI et al. discloses an actuator comprising: a connector arranged and constructed to be connected to a power source and to receive a control signal [figure 11]; a coil [61] arranged and constructed to produce a magnetic field when excited; an IC [200] arranged and constructed to supply an excitation current to the coil based on the control signal, wherein the excitation current is greater than a current of the control signal [figures 1 and 2]; a core [62, 64] arranged and constructed to provide a path of the magnetic field of the coil; a rotor [4] disposed within a part of the core; wherein: the coil is disposed on one side of the core; and the coil is disposed on one side of the core; and the IC is positioned adjacent to a part of the core that is adapted to contact a heat dissipation member[11, 12, figure 10].

Claim 22, TARUI et al. discloses an actuator comprising: a connector arranged and constructed to be connected to a power source and to receive a control signal [figure 11]; a coil [61] arranged and constructed to produce a magnetic field when excited; an IC [200] arranged and constructed to supply an excitation current to the coil based on the control signal, wherein the excitation current is greater than a current of

Art Unit: 2832

the control signal [figures 1 and 2]; a core [62, 64] arranged and constructed to provide a path of the magnetic field of the coil; a rotor [4] disposed within a part of the core; wherein: the coil is disposed on one side of the core; and the IC is positioned such that a distance between a center of the IC and a part of the core that is adapted to contact a heat dissipation member is smaller than a distance between the center of the IC and a central axis of the coil figure 9].

Allowable Subject Matter

Claims 10-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Rojas whose telephone number is (571) 272-1998. The examiner can normally be reached on M-F 8-4:00), every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2832

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bernard R. Br
Br


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